

AMENDMENTS TO THE CLAIMS:

Please amend claims 1, 5, and 8-11 as listed in the following listing of the claims, which replaces all prior versions and listings of claims in the application:

1. (Currently Amended) An associative memory-based computer, comprising:
at least one associative memory;[[.]]
a plurality of associative data memories capable of temporarily holding input or output data of said associative memory;[[.]] and
a value ~~judgement~~judgment device receiving part of the data held in said plurality of associative data memories.
2. (Original) The associative memory-based computer according to claim 1, wherein said associative memory is formed of a chaotic neural network.
3. (Original) The associative memory-based computer according to claim 2, further comprising a function to modulate a threshold value of a neuron forming the associative data in accordance with a fired frequency of the relevant neuron.
4. (Original) The associative memory-based computer according to claim 3, wherein the modulation is carried out by decreasing the threshold value of the neuron in proportion to the fired frequency thereof.

5. (Currently Amended) The associative memory-based computer according to claim 1, wherein said associative data memories include a first associative data memory sending and ~~[[/]]~~receiving data directly to and ~~[[/]]~~from said associative memory, and a plurality of second associative data memories sending and ~~[[/]]~~receiving data to and ~~[[/]]~~from said associative memory via said first associative data memory.

6. (Original) The associative memory-based computer according to claim 5, further comprising a function to modulate a threshold value of a neuron forming the associative data in accordance with a fired frequency of the relevant neuron.

7. (Original) The associative memory-based computer according to claim 6, wherein the modulation is carried out by decreasing the threshold value of the neuron in proportion to the fired frequency thereof.

8. (Currently Amended) The associative memory-based computer according to claim 5, wherein

said value ~~judgement~~ judgment device receives part of the data in said first associative data memory to evaluate whether an output result associated in the associative memory ~~is a desired result or answers for a purpose~~ conforms with a preconfigured purpose, and

an output signal of said value ~~judgement~~judgment device is used for control of whether to transfer the associative data held in said first associative data memory to said plurality of second associative data memories.

9. (Currently Amended) The associative memory-based computer according to claim 5, wherein

said value ~~judgement~~judgment device receives part of the data in said plurality of second associative data memories to evaluate whether a plurality of pieces of associative data held in said plurality of second associative data memories are consistent with each other, and

an output signal from said value ~~judgement~~judgment device is used for control of whether to transfer the associative data held in said second associative data memories to said first associative data memory.

10. (Currently Amended) An associative memory-based computer, comprising:
a chaotic associative memory including a raw neuron group as a collection of raw neurons interacting ~~implementing actions with the outside world like sensory organs or muscles,~~ and a symbol neuron group as a collection of symbol neurons serving as ~~sources of information processing~~ processors within the computer;

a first associative data memory directly connected to the symbol neuron group of said chaotic associative memory and having a function to temporarily hold a symbol pattern represented by states of neuron signals of said symbol neuron group;

a plurality of second associative data memories connected to said first associative data memory and having a function to hold a plurality of patterns of the symbol pattern on said first associative data memory as required;

a first value ~~judgement~~judgment device receiving some of the signals of said first associative data memory and outputting a signal for determining whether the pattern on said first associative data memory is worth holding on said second associative data memory; and

a second value ~~judgement~~judgment device receiving part of the data within said second associative data memories and having a function to determine whether the plurality of symbol patterns held in said second associative data memories are consistent with each other.

11. (Currently Amended) An associative memory-based computer, comprising:
an associative memory portion including a plurality of chaotic associative memories,

each said chaotic associative memory having a symbol neuron group ~~representing an abstractive state~~ and a raw neuron group connected with raw pattern signal inputs from sensory organs ~~like eyes and ears or~~ and raw pattern signal outputs

to muscles like ~~vocal muscle and those of hands and legs or secretory organs for a~~
~~specific role~~ to implement an interface with the outside world, and relating a raw pattern
from various sensory organs to an abstractive, specific symbol pattern formed based on
a common symbol pattern through learning to implement complicated association
including correlation between the chaotic associative memories;

a working memory portion including a symbol stage having a function to
temporarily store and hold said common symbol pattern, all said specific symbol
patterns and a state pattern from said associative memory portion and also having a
function to temporally integrate an activation value for each symbol neuron to modulate
its firing threshold value in accordance with the integral, a plurality of working memories
having a function to hold pattern information held in said symbol stage for a prescribed
period of time, and a control sequencer generating a state pattern signal for use in
defining directivity of association, invalidation of each input information, invalidation of
each associative output, or directivity of each symbol signal in accordance with an
external object signal and applying the generated signal commonly to said associative
memories; and

a value ~~judgement~~ judgment network portion including a result determination
network receiving ~~some~~ at least a portion of the pattern signals of said symbol stage in
said working memory portion and having a function to evaluate at least whether a result
associated in said associative memory portion conforms with a preconfigured purpose
~~answers for a purpose~~ and thus to determine whether to newly transfer the symbol

pattern held to said working memory, and a consistency determination network receiving some of the pattern signals from said working memories and having a function to determine whether a plurality of symbol patterns held in said working memories are consistent with each other, and, according to the value evaluation, to cause a control sequence to develop into an actual operation;

each said symbol neuron group including, between itself and said working memory portion, a portion where a state pattern signal common to all the memories is input, a portion where a common symbol pattern is input/output, and a portion where a specific symbol pattern for each memory is input/output,

said plurality of working memories having a function to have values indicating the degrees of ~~activation~~validity for information held in respective said working memories, the degree of ~~activation~~validity having a mechanism to be attenuated with a certain time constant and at the same time to be increased or ~~or~~ decreased by a prescribed amount in accordance with a condition of said control sequence, and

each of said result determination network and said consistency determination network being formed with a hierarchy-type neural network having a function to improve a value ~~judgement~~judgment capability through learning, and value signals as outputs from said result determination network and said consistency determination network being applied to the control sequencer in said working memory portion.

12. (Original) The associative memory-based computer according to claim 11, wherein said directivity of association indicates whether to abstract or objectify said association.

13. (Original) The associative memory-based computer according to claim 11, wherein said directivity of each symbol signal indicates whether said common symbol pattern is an input or output with respect to each said chaotic associative memory.